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December 18, 1995

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SUMMARY OF THE INDUSTRIAL AREA INTERIM MEASURE/INTERIM REMEDIAL ACTION
PROJECT (KH00003NS1A) - JEL-053-95

Action None required

At your request, we have provided a summary of the Industrial Area Interim Measure/Interim Remedial Action project. This summary presents the history of the project, its current scope, a summary of its benefits, its relative potential to the Site Vision, and some recommendations for its administration and implementation. I hope the enclosed summary answers any questions that Kaiser-Hill, L L C may have regarding the project.

If you have any questions, or would like a briefing for yourself or your management, please do not hesitate to call.

John E Law

John E Law, P E
Remediation Manager
Sitewide Actions

MSB bll

Enclosure
As Stated

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INDUSTRIAL IM/IRA PROJECT

Objectives

The purpose of this letter is to provide the history and scope of the Industrial Area Interim Measure/Interim Remedial Action (IA IM/IRA), discuss its benefits and potential future, to suggest ways in which the program can benefit ASAP, and how the regulatory drivers behind the program may be satisfied by ASAP. Kaiser-Hill has requested clarification regarding the merits of the IA IM/IRA, and how this program fits into the overall mission objectives.

Development of the Industrial Area IM/IRA

In 1992, the EPA and State anticipated that changes in the RFETS mission would result in a need for environmental controls and monitoring to be responsive to the non-routine activities that make up the transition from a production facility to its final end state. Under the IAG, an IM/IRA was requested for the Industrial Area. The IM/IRA language was used by the regulators to make the response an enforceable action. All parties recognized early in the project that this IM/IRA could be fundamentally different from previous, more conventional, IM/IRAs because it would entail mostly monitoring and integration of existing programs rather than remediation. The IM/IRA framework allowed RFETS to develop the concept of an interim protective system that would be responsive to the changing conditions at the Site. It also provided an opportunity to begin discussions on the merits of consolidating the Industrial Area OUs and adjusting their investigation and remediation schedules to be more consistent with D&D, environmental remediation, residue elimination, and other activities required to reach the site end state. Key elements of the system were already in place in the form of existing environmental monitoring, work control, and emergency response procedures. The IM/IRA provides an opportunity to demonstrate how the various monitoring and response programs already in place at Rocky Flats work together to provide protection of the environment and the surrounding communities. The IM/IRA served as a regulatory driver to integrate these programs and develop the administrative linkages between them and transition activities. Subject matter experts for each of the monitored environmental media worked closely with the DOE and regulatory agencies to develop the framework for monitoring future activities in the Industrial Area. Upon approval of the Decision Document in November of 1994, implementation began for actions proposed in the IM/IRA. These actions are being implemented according to the schedule outlined in the document.

Scope of the Industrial Area IM/IRA

The IM/IRA was designed to focus monitoring efforts on the specific activities of the transition programs and develop the flexible coverage necessary to be responsive to the new mission. The ultimate objectives are to minimize the spread of contaminants during transition activities by providing early detection of releases, and provide early mitigative responses.

The IA IM/IRA accomplishes these objectives in several ways. By identifying potential source areas and migration pathways from the industrial area, the current monitoring network was upgraded to insure that all industrial area migration pathways are appropriately monitored. These upgrades include:

- Addition of five air samplers around the perimeter of the industrial area which are being used to establish baseline levels of VOCs, and for monitoring during transition activities
- Upgrade of five industrial area surface water outfall sites. These upgrades include the addition of VOC monitoring capability, upgrading the flow measuring capabilities and adding telemetry systems to three of the outfalls. These monitoring stations serve the objectives of the IA IM/IRA as well as anticipated requirements of the storm water discharge permit
- The groundwater monitoring program was augmented to focus on groundwater flowpaths which may reach the surface water at the industrial area perimeter. IM/IRA wells are used as an integral part of the ground water monitoring system and locations are developed in conjunction with the ground water monitoring program
- Upgrade of incidental water and foundation drain water monitoring and management

In addition to upgrading the current monitoring network, specific temporary monitoring was developed to focus on buildings or areas in which transition and clean up activities are likely to cause environmental impacts. Focused monitoring is located close to potential source areas, samples for a very limited analyte suite, is portable, and is designed to provide early detection of low level releases from the activity areas. Once an activity is completed, the monitors may be relocated and reconfigured to monitor another activity.

A third way in which the objectives of the IM/IRA are being met is through the development of preprogrammed responses to detected releases. If during a D&D activity, an analyte is detected at levels above established baseline conditions, the IM/IRA outlines response actions which include investigation of the potential source, and mitigation if necessary. The response actions are loosely defined to enable flexibility in how low level releases are addressed. The intent of the preprogrammed responses is to insure that some action will be taken, and that an administrative linkage between the monitoring program, and the transition program is established.

Key Features and Benefits of the IM/IRA

Focused monitoring increases characterization of the Industrial Area source areas. Understanding the baseline contaminant loads associated with these areas will limit the amount of environmental protection necessary to carry out ASAP activities, and limit the response actions necessary in the event of a release. In essence, IM/IRA responses address changes in local ambient levels by determining a local baseline, and responding to detected changes during transition activities. Using this approach to define release response criteria makes mitigative actions for areas of high ambient levels a result of best management practice decisions rather than regulatory compliance. This approach can be used to broadly define the operational compliance envelope of ASAP activities.

An added benefit of this approach is that as the contaminant loads from each area are characterized, mitigative actions for these areas may be initiated to reduce the overall downstream contaminant load leaving the Industrial Area. Reducing contaminant loads, particularly in surface water, will gradually reduce the downstream water management requirements and their associated costs.

An example of the program benefits is currently being demonstrated near buildings 884 and 889. In anticipation of the D&D of building 889, surface water monitors were installed in the effluent points that drain the 889 sub-basin. These monitors detected Pu levels as high as 90 pCi/l in the storm water runoff from this area (the proposed drainage standard is 0.15 pCi/l). Currently the source is being investigated. This baseline monitoring has established that the ambient levels for this area are quite high. If during D&D activities the plutonium levels in storm water runoff approach 90 pCi/l, it may not be indicative of a release due to D&D actions. If a source for this high ambient level can be identified, we may elect to clean it up and reduce the area's impact to the downstream contaminant load.

In this example, the efficiencies of focused monitoring can translate into cost savings in several different ways. The need to respond to high levels that are not related to a release is eliminated. The opportunity exists to remove the source area and reduce liability and risk, and source reduction would also translate into reduced downstream water management costs.

The focused monitoring of the IA IM/IRA allows the entire environmental monitoring program to be flexible and responsive to the changing configuration of the Site and its multiple transition activities. Flexibility is achieved by maintaining temporary monitoring sites that move relative to transition activities. This approach differs from past practices where the Site, in a production mode, had a relatively static configuration and environmental monitoring did not need to accommodate frequent changes. Current and future monitoring must be flexible enough to respond to the rapid changes that ASAP will bring, and ultimately provide post closure monitoring to ensure that clean up, disposal, and storage activities are effective.

This approach is demonstrated by the current monitoring of the 884/889 area, the preparation of monitoring for the 224, 221 tank removals, and preparation for focused monitoring of the 903 pad area, and preliminary planning for building 991 D&D.

Additional efficiencies are also realized by reducing the analyte list for focused monitoring to just the constituents that have been demonstrated to exist in the activity area. The 889 monitors just look for radionuclides, the 221, 224 monitors will just look for constituents from those tanks or products from the D&D process. This efficiency translates into reductions in analytical costs.

Relationship of IA IM/IRA to Site Vision

As described earlier, the driver for this program is the IM/IRA language of the IAG, and the Decision Document outlines the specific commitments of the IA IM/IRA. These commitments could be implemented as a component of ASAP or any other strategy as long as the intent of the IM/IRA is being satisfied. The IA IM/IRA provides an agreed upon framework in which to integrate the monitoring of all the major activities that make up the end state transition of RFETS, Environmental remediation, D&D, residue elimination, and Pu stabilization. In addition, it provides the focal point to integrate these programs with environmental monitoring.

of all media, and response actions in the event of a release. This integrated approach is consistent with the long term vision for operation of the site. The IM/IRA currently remains as a regulatory driver for this approach.

Now that all transition to end state activities fall under the auspices of ASAP, it is reasonable to assume that an environmental protection component will be a necessary part of the ASAP concept in order to be accepted by the public and the regulators. An opportunity now exists to incorporate the intent and function of the IM/IRA into the environmental protection component of ASAP. While ASAP represents a significant departure from previous RFETS transition and clean up plans, utilization of existing programs to the extent possible, will allow ASAP to be implemented aggressively and in a timeframe consistent with its vision. Utilizing the IM/IRA as the environmental protection component of ASAP has the benefits of prior stakeholder exposure and approval as well as having the advantage of current implementation.

Implementation of IM/IRA

The IM/IRA is currently being implemented under the Environmental Restoration program. The ER program provides a focal point for the integration of environmental monitoring, D&D, surface water management, and environmental remediation. As the focal point, the ER program is responsible for the coordination of the IM/IRA effort. Administration of this program includes the deployment of monitoring stations, development of local baseline levels, tracking of monitored data, reporting results to decision makers, and initiating release investigations.

Administrative integration should continue to develop and should consider the means in which information will be collected, disseminated, and managed, and should also consider the need to be flexible and responsive to changing monitoring requirements. Monitoring during ASAP activities will be generating data from multiple source areas on a real-time and near real-time basis. This includes the collection of telemetry data and merging it with data received back from the laboratories. This data will be compared against baseline levels generated for each source area, and detected changes may initiate investigations or mitigative actions. Development of a system to manage the flow of information during ASAP monitoring can help insure that the data are being utilized in the most effective manner, and that decision makers have ready access to that data.

Summary and Conclusion

The IM/IRA provides focused monitoring during end state transition activities that is activity specific and cost effective. This monitoring is designed to be flexible and responsive to changes in the configuration of the site. Monitoring design is based on potential source areas in the Industrial Area, migration pathways exiting the Industrial Area, analytes demonstrated in an activity site, and portability.

The focused approach to Industrial Area monitoring results in cost savings during D&D activities by establishing baseline levels to reduce the number of reported releases and required responses, and characterizing activity areas so that risk reduction activities can be implemented, and downstream contaminant loads can be reduced.

The IM/IRA integrates the monitoring of environmental media with transition (ASAP).

activities. Regardless of the dynamic nature of the mission change, the need to provide sitewide integration of programs is more apparent as the public and regulators witness a decline in the budget, and potentially perceive a decline in a commitment to environmental protection.

Actions within the IA IM/IRA are consistent with the long term site vision. The IM/IRA should continue to develop and perhaps become the environmental protection component of ASAP. Its benefits in the ASAP approach are that it has already been approved by the public and the regulators, represents efficiencies and cost savings in the monitoring program, was developed as a forward looking program, and is currently being implemented.